

-30-

08/925208

## ABSTRACT

## A BROADBAND LASER SOURCE

A broadband laser source comprising: a resonant cavity (1) containing a medium (2) which emits optical energy (3) in a continuum of wavelengths in response to application of pump energy (4) to the medium (2); a source of pump energy (5) for producing said optical energy (3); a frequency shifter (6) within the resonant cavity (1); and a tuneable spectral filter (7) within the resonant cavity (1), and the apparatus being such that in use the tuneable spectral filter (7) has a peak wavelength which is repeatedly swept in a substantially resonant fashion over a wavelength range equal to, or a fraction of, a linewidth of the broadband source such that the rate of change of the peak wavelength of the tuneable spectral filter (7) is substantially equal to the rate of change of the frequency of the optical energy (3) as it is frequency shifted within the resonant cavity (1) by the frequency shifter (6).